

CLAIMS

What is claimed is:

1. A selectable dark dot gain print mode method for use in a color
5 ink jet printer, the dark dot gain print mode method comprising:

selectively applying at least one dark color ink to a dry portion of a print
media; and

- only subsequently, selectively applying at least one light color ink to
said portion of said print media that is still wet following said application of
10 said at least one dark color ink.

2. The dark dot gain print mode method as recited in claim 1,
wherein said at least one dark color ink has more colorant than said at least one
light color ink.

- 15 3. The dark dot gain print mode method as recited in claim 1,
wherein:

said at least one dark color ink is selected from a group of color inks
comprising Black (K) ink, dark Magenta (M) ink, and dark Cyan (C) ink; and

- 20 said at least one light color ink is selected from a group of color inks
comprising Yellow (Y) ink, light magenta (m) ink, and light cyan (c) ink.

4. An object definition print mode method for use in a color ink jet
printer, the object definition print mode method comprising:

- 25 selectively applying at least one light color ink to a dry portion of a print
media; and

only subsequently, selectively applying at least one dark color ink to said portion of said print media that is still wet following said application of said at least one light color ink.

5 5. The object definition print mode method as recited in claim 4, wherein said at least one dark color ink has a more colorant than said at least one light color ink.

10 6. The object definition print mode method as recited in claim 4, wherein:

 said at least one dark color ink is selected from a group of color inks comprising Black (K) ink, dark Magenta (M) ink, and dark Cyan (C) ink; and said at least one light color ink is selected from a group of color inks comprising Yellow (Y) ink, light magenta (m) ink, and light cyan (c) ink.

15 7. An adaptable print mode method for use in a color ink jet printer, the adaptable print mode method comprising:

 selecting between at least two print modes comprising a dark dot gain print mode and an object definition print mode, wherein:

20 said dark dot gain print mode is configured to cause at least one dark color ink to be selectively applied to a dry portion of a print media, and thereafter at least one light color ink to be selectively applied to said portion of said print media while still wet from said application of said at least one dark color ink, and

25 said object definition print mode is configured to cause said at least one light color ink to be selectively applied to said dry portion of said print media, and thereafter said at least one dark color ink to be selectively applied to said

portion of said print media while still wet from said application of said at least one light color ink.

8. The adaptable print mode method as recited in Claim 7, wherein
5 selecting between said at least two print modes includes selecting one of said at least two print modes based on content to be printed on said print media.

9. The adaptable print mode method as recited in Claim 7, wherein
selecting between said at least two print modes includes selecting one of said at
10 least two print modes based on at least one parameter associated with said inks.

10. The adaptable print mode method as recited in Claim 7, wherein
selecting between said at least two print modes includes selecting one of said at
least two print modes based on at least one parameter associated with said print
15 media.

11. The adaptable print mode method as recited in Claim 7, wherein
said at least one dark color ink has more colorant than said at least one light
color ink.
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12. The adaptable print mode method as recited in Claim 7, wherein:
said at least one dark color ink is selected from a group of color inks
comprising Black (K) ink, dark Magenta (M) ink, and dark Cyan (C) ink; and
said at least one light color ink is selected from a group of color inks
25 comprising Yellow (Y) ink, light magenta (m) ink, and light cyan (c) ink.

13. A method comprising:

selectively ordering a sequential application of at least two marking materials that are to be applied to a print media based on an amount of colorant associated with each of said at least two marking materials.

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14. The method as recited in Claim 13, wherein said marking materials include liquid inks.

10 15. The method as recited in Claim 13, wherein selectively ordering said sequential application of said at least two marking materials based on said amount of colorant associated with each of said at least two marking materials further includes:

selectively ordering that a first one of said at least two marking materials having a first amount of colorant is applied to said print media prior to a second
15 one of said at least two marking materials having a second amount of colorant, wherein said first amount of colorant is greater than said second amount of colorant.

16. The method as recited in Claim 13, wherein selectively ordering
20 said sequential application of said at least two marking materials based on said amount of colorant associated with each of said at least two marking materials further includes:

selectively ordering that a first one of said at least two marking materials having a first amount of colorant is applied to said print media prior to a second
25 one of said at least two marking materials having a second amount of colorant, wherein said second amount of colorant is greater than said first amount of colorant.

17. The method as recited in Claim 13, wherein selectively ordering said sequential application of said at least two marking materials based on said amount of colorant associated with each of said at least two marking materials

5 further includes:

associating said sequential application of said at least two marking materials with at least two different printing passes to be conducted over an applicable portion of said print media.

10 18. The method as recited in Claim 17, wherein said applicable portion is associated with a single pixel.

19. The method as recited in Claim 13, further comprising:

providing at least one identifying parameter associated with at least one
15 of said two marking materials; and

wherein selectively ordering said sequential application of said at least two marking materials based on said amount of colorant associated with each of said at least two marking materials further includes selectively ordering said sequential application of said at least two marking materials based on said at
20 least one identifying parameter.

20. The method as recited in Claim 13, further comprising:

providing at least one identifying parameter associated with said print media; and

25 wherein selectively ordering said sequential application of said at least two marking materials based on said amount of colorant associated with each of said at least two marking materials further includes selectively ordering said

sequential application of said at least two marking materials based on said at least one identifying parameter.

21. The method as recited in Claim 13, further comprising:
5 providing a print map that indicates said selected ordering of said sequential application of said at least two marking materials.

22. The method as recited in Claim 21, further comprising:
sequentially applying said at least two marking materials to said print
10 media based on said print map.

23. The method as recited in Claim 22, wherein sequentially applying
said at least two marking materials to said print media based on said print map
includes:
15 causing at least two ink-jet pens to apply liquid ink marking materials to
said print media based on said print map during a multi-pass printing process.

24. A printing device comprising:
an ink-jet printing mechanism configurable to selectively apply at least
20 two different color inks to a print media; and
logic operatively coupled to said ink-jet printing mechanism and
configured to select between at least two print modes comprising a dark dot
gain print mode and an object definition print mode, wherein:
in said dark dot gain print mode, said logic causes said ink-jet printing
25 mechanism to selectively apply at least one dark color ink to a dry portion of
said print media, and only thereafter apply at least one light color ink to said

portion of said print media while still wet with said at least one dark color ink,
and

in said object definition print mode, said logic causes said ink-jet
printing mechanism to selectively apply at least one light color ink to said dry
5 portion of said print media, and only thereafter apply at least one dark color ink
to said portion of said print media while still wet with said at least one light
color ink.

25. The printing device as recited in Claim 24, wherein said logic
10 selects between said at least two print modes based on content to be printed on
said print media.

26. The printing device as recited in Claim 24, wherein said logic
selects between said at least two print modes based on at least one parameter
15 associated with said inks.

27. The printing device as recited in Claim 24, wherein said logic
selects between said at least two print modes based on at least one parameter
associated with said print media.
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28. The printing device as recited in Claim 24, wherein said at least
one dark color ink has a greater amount of colorant than said at least one light
color ink.

25 29. The printing device as recited in Claim 24, wherein:
said at least one dark color ink is selected from a group of color inks
comprising Black (K) ink, dark Magenta (M) ink, and dark Cyan (C) ink; and

said at least one light color ink is selected from a group of color inks comprising Yellow (Y) ink, light magenta (m) ink, and light cyan (c) ink.

30. An apparatus comprising:

5 logic operatively configurable to determine a printing sequence in which at least two different liquid inks are to be applied to a print media based on an amount of colorant associated with each of said at least two different liquid inks.

10 31. The apparatus as recited in Claim 30, wherein said logic is further operatively configurable to access source file data defining at least one object to be printed on said print media using said at least two different liquid inks.

15 32. The apparatus as recited in Claim 31, wherein said printing sequence establishes that a first one of said at least two different liquid inks having a first amount of colorant is to be applied to said print media prior to applying a second one of said at least two different liquid inks having a second amount of colorant that is lower than said first amount of colorant.

20 33. The apparatus as recited in Claim 31, wherein said printing sequence establishes that a first one of said at least two different liquid inks having a first amount of colorant is to be applied to said print media after applying a second one of said at least two different liquid inks having a second amount of colorant that is higher than said first amount of colorant.

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34. The apparatus as recited in Claim 30, wherein said printing sequence defines when, during at least two different printing passes, each of

said at least two different liquid inks are to be applied to an applicable portion of said print media.

35. The apparatus as recited in Claim 34, wherein said applicable
5 portion is associated with a single pixel provided in source file data defining at least one object to be printed on said print media using said at least two different liquid inks.

36. The apparatus as recited in Claim 30, wherein said logic is further
10 configurable to operatively consider at least one identifying parameter associated with at least one of said two different liquid inks when determining said printing sequence.

37. The apparatus as recited in Claim 30, wherein said logic is further
15 configurable to operatively consider at least one identifying parameter associated with said print media when determining said printing sequence.

38. The apparatus as recited in Claim 30, wherein said logic is further
20 configurable to establish print map data defining said printing sequence.

39. The apparatus as recited in Claim 38, further comprising:
a printing mechanism operatively coupled to said logic and configurable
to receive said print map data and in response sequentially apply said at least
two different liquid inks to said print media according to said printing
25 sequence.

40. The apparatus as recited in Claim 39, wherein said printing mechanism in response to said print map individually applies each of said at least two different liquid inks to said print media during different printing passes.

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41. The apparatus as recited in Claim 30, wherein said logic is operatively configurable within a printing device.

42. The apparatus as recited in Claim 30, wherein said logic is
10 operatively configurable within a computer device.

43. An ink pen set for use in a scanning printing device, the ink pen set comprising a plurality of ink pens including at least one dark color ink pen and at least one light color ink pen, wherein said dark color and light color ink
15 pens are not both centered along a axis parallel to a scanning direction associated with said printing device.

44. A method for use in a printing device, the method comprising:
determining dot gain requirements; and
20 selectively altering an ink application order based on said determined dot gain requirements.